

Amendments to the Specification:

Please replace the paragraph beginning on page 3, line 10 with the following redlined paragraph:

According to existing studies, the human brain performs a—recognition of the acoustic scenario in two ways: in a time frequency plane, the tones are clustered if they are close together either in time or in frequency.

Please replace the paragraph beginning on page 6, line 25 with the following redlined paragraph:

The training unit 4, which operates in real time, supplies the spatial filtering unit 3 with two signals to be filtered $e_L(i)$, $e_R(i)$, here designated for simplicity by $e(i)$. In the filtering step, the signals to be filtered $e(i)$ are the input signals $In_L(i)$ and $In_R(i)$, and in the training step, they derive from the superposition of input signals and noise, as explained hereinafter with reference to Figure 7.

Please replace the paragraph beginning on page 9, line 21 with the following redlined paragraph:

The neuro-fuzzy networks 16L, 16R are three-layer fuzzy networks described in detail in the above-mentioned above-mentioned patent application (see, in particular, Figures 3a and 3b therein), and the functional representation of which is given in Figure 3, where, for simplicity, the index (i) corresponding to the specific sample within the respective work window is not indicated, just as the channel L or R is not indicated. The neuro-fuzzy processing represented in Figure 3 is repeated for each input sample $e(i)$ of each channel.

Please replace the paragraph beginning on page 12, line 1 with the following redlined paragraph:

For the precise operation of each channel 10L, 10R of the spatial filtering unit 3 and its integrated implementation, the reader is referred to Figures 3a, 3b and 9 of the above mentioned above-mentioned patent application EP-A-1 211 636.

Please replace the paragraph beginning on page 13, line 17 with the following redlined paragraph:

The target memory 35 is a random access memory (RAM) in one embodiment, which contains a preset number (from 100 to 1000) of samples of a target signal. The target signal samples ~~the~~ are preset or can be modified in real time and are chosen according to the type of noise to be filter (white noise, flicker noise, or particular sounds such as noise due to a motor vehicle engine or a door bell). Likewise, the current-weight memory 40, the best-weight memory 41, the sample memory 45 and the best-fitness memory 47 are RAMs of appropriate sizes.